

CRUISE SHIP DISCHARGES

MEMORANDUM OF UNDERSTANDING



HISTORY

- Cruise ships to Seattle 1999
- Early 2003: Developed BMPs for cruise ship maintenance while in Port
- May 3, 2003:
 - Norwegian Sun discharged approximately 16,000 gallons of sewage sludge into the Strait of Juan de Fuca
 - Accidental due to outdated computer system for new advanced treatment system

Advanced Wastewater Treatment Systems (AWTS)

- Scanship - biological reactor flocculation/flotation system
- Hamworthy – biological reactor, ultrafiltration (membrane) system
- Rochem – Reverse Osmosis ultrafiltration
- Zenon - biological reactor, ultrafiltration (membrane) system

All with UV disinfection

Princess MBR



The MOU

- SHIPS COVERED:
 - NWCA member lines (all > 1day, all >700 passengers, 14 ships in 2004)
- SHIPS NOT COVERED:
 - Non NWCA large cruise ships that come to WA
 - Small cruise ships
 - AK Marine Hwy System (out of Bellingham)
 - WA state ferries (to land)
 - Other types of ships or boats

The MOU

- Signed April 20, 2004
One day before start of cruise season
- Major components
 - Defines “Waters subject to the MOU”
 - Prohibits untreated blackwater and untreated graywater discharges
 - Prohibits treated blackwater and treated graywater discharges unless:
 - AWTs which meets Alaska certification standards
 - One nautical mile away from berth and six knots
 - Documentation prior to discharge

The MOU cont.

- Allows discharge within one nautical mile if:
 - Documentation submitted prior to discharge
 - 24-hr continuous turbidity or equivalent monitoring
 - Automatic shut down
 - UV disinfection immediately prior to discharge
 - Vessel specific plan

The MOU cont.

Sampling, etc.

- If discharging, agree to:
 - Sample 1/month in Seattle (BOD, TSS, fecal coliform, pH, residual chlorine)
 - Split samples with Ecology upon request
 - WET testing once/2years
 - Provide test results (Alaska and Seattle)
 - Vessel inspections by Ecology

The MOU cont.

Sludge

- Sludge discharges prohibited in waters subject to MOU, with 12 nautical miles from shore, and within “Area to be Avoided” of the Olympic Coast National Marine Sanctuary

The MOU cont.

Other

- Solid waste, prohibited
- Hazardous waste management
- Comply with Washington's more restrictive hazardous waste laws
- USCG jurisdiction
- Notification requirements
- Annual meeting

Annual Report

- Report analyzes the cruise season and the effectiveness of the MOU (on website)
- Sample results analyzed

MOU Amendments

- Amendments finalized – getting final signatures
- Amendments discussed during annual meeting (November, 2004)
- Had been put on hold (legislation, shellfish-virus meeting)

MOU Amendments cont.

- Amendments include:
 - Changing references to the Seattle being the only port berthed to all ports in Washington
 - Adding a requirement for all vessels within the NWCA to submit an annual report of compliance with MOU
 - Adding regulation referenced in Appendix vi to show all effluent limits required for discharge

Viruses and Shellfish

- Budget includes appropriation for virus/cruiseship study
- DOH leading
- Maps

■ 2004 Discharge Status

- Approvals for discharge continuously: Norwegian Star and Norwegian Spirit
- Submitted documentation to discharge in WA waters >1nm from berth and >6 knots: Holland America Oosterdam
- Holland America Zaandam called to Port in Port Angeles and discharged without approval, proper notification, sample results...
- Sapphire Princess discharged UNTREATED graywater in June and discharged treated effluent throughout the season without approval...

■ 2005 Discharge Status

- Approvals for discharge continuously:
Norwegian Star and Norwegian Spirit still stand,
Approved this season: Norwegian Dream,
Diamond Princess & Sapphire Princess, may be
requested for other ships
- Discharge allowed in WA waters >1nm from
berth and >6 knots: Holland America
Oosterdam; may be requested for other ships

THE END!
QUESTIONS?